 <b>Independent Verification &amp; Validation Program</b>	<b>Work Instruction Template</b>	<b>T2003</b> <b>Revision: D</b> <b>Effective Date:</b> <b>January 27, 2010</b>
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APPROVAL SIGNATURES		DATE
Gregory Blaney (original signature on file)	IMS Representative	01/27/2010

REVISION HISTORY			
Revision	Description of Change	Author	Effective Date
Basic	Initial Release – conversion of IVV 05-3 to T2003	Paige Eckard	04/13/2007
A	Updated process flow diagrams to align with Facility Management paradigm	Stephanie Ferguson	02/04/2008
B	Updated Shared Network Drive links	Stephanie Ferguson	06/13/2008
C	Changed “IV&V Facility” to “IV&V Program”; updated Shared Drive path	Stephanie Ferguson	12/11/2008
D	Updated verbiage in Section 6.0, <i>Records</i>	Sara Cain	01/27/2010

REFERENCE DOCUMENTS	
Document	Title
IVV QM	NASA IV&V Quality Manual
IVV 05	Document and Data Control

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## Purpose of the Work Instruction Template

This template is designed to provide a standard outline and format for work instructions (WIs). This template is also designed to provide standard sections that are used in all or most WIs, and direction to provide tailoring and section-content guidance for those who generate or update WIs.

## Work Instruction Template Conventions

Three different styles of text are used in this template:

1. [Text included in square brackets]

This text represents WI-specific information to be provided. Examples are [WI name] for the name of the WI, and [purpose] for the purpose of the WI. Where this text appears, insert the WI-specific information between the brackets, and then delete the brackets.

2. *{Italic text in braces}*

This text is guiding or explanatory in nature. It will include tailoring guidance and descriptions of the kinds of information to be included in each section. Therefore, this text should be deleted from the WI.


3. Normal text

This is standard text that should be copied verbatim into the WI as necessary. It represents any text that does not fit into either of the above categories.

## Instructions for Using the Work Instruction Template


Copy the following template into a new document, enable the “Track Changes” feature of Microsoft Word, and follow the conventions above.

After completion, save a copy of the document in the S:\NASA Shared\Operations - Ferguson\Institutional Services\IV&V Management System\Documentation\Working directory for review. The document shall be named “IVV [WI number] - WORKING mmddyy”, where “mmddyy” represents the month, date, and year on which the draft was last modified.


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WI creators or modifiers shall employ the following general guidelines when creating and/or modifying WIs:

- a. The font for all sections of the WI shall be Arial.
- b. The body text shall be 12-point font.
- c. The font family for the header shall be Arial, case shall be proper, and font weight shall be bold. Font size shall be 12-point in the right corner, and 14-point in the center.
- d. The footer shall appear exactly as represented in this document; once copied into the new document, no modifications to the footer are necessary.
- e. Drafts should be watermarked "DRAFT" on the Approval Page of the WI.
- f. With the exception of section headers, all text shall be full-justified.
- g. WI headings and subheadings shall use the point numbering system. All headings and subheadings shall be bold.
  - i. First-level headings (e.g., Section 1.0 and Section 2.0) shall be left-justified in 12-point font and specified in proper case.
  - ii. Subheadings shall be formatted in 12-point font, specified in proper case, and indented as appropriate in half-inch increments from the last superior section.
- h. Ensure that all references to the NASA IV&V Program read "NASA IV&V Program."
- i. Verify that all hyperlinks and file paths in the WI are valid.
- j. Verify that all references to sections within the WI are qualified with italicized titles set off by commas.
  - Example: "Refer to Section 3.0, *Definitions and Acronyms*, for additional information."
- k. Verify that all references to other documents are qualified with italicized titles set off by commas.
  - Example: "Refer to IVV 09-4, *Project Management*, for additional information."
- l. Verify that all documents specifically mentioned in the text of the WI are listed in the "Reference Documents" table on the Approval Page. Also verify that the "Reference Documents" table contains any parent/child documents associated with the WI.
- m. Ensure that Section 3.0, *Definitions and Acronyms*, contains the proper reference to the Quality Manual.
- n. Verify that all records contained in the table in Section 6.0, *Records*, are complete and accurate, and that all fields in the table (e.g., Record Name, Original, Responsible Person, Location, etc.) are complete and accurate for each


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record. (For a new record, verify that the Record Name and Responsible Person fields are complete and accurate; the Document Control Custodian [DCC] will complete the remaining fields for new records.)

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*{Page intentionally left blank.*

*Template begins on the following page.}*

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*{The Approval Signatures table contains the name of the Approving Official, role of the Approving Official within the IMS, and date the Approving Official signed the DCR to approve the addition or modification of the document.}*

APPROVAL SIGNATURES		DATE
[Approving Official] (original signature on file)	[Approving Official's IMS Role]	[mm/dd/yyyy]

*{The Revision History table contains the revision (represented by letters of the alphabet after the initial release, which is represented as the "Basic" release), a description of the document revision, the author who made the change, and the effective date of the document.}*


REVISION HISTORY			
Revision	Description of Change	Author	Effective Date
Basic	Initial Release	[author name]	[mm/dd/yyyy]

*{The Reference Documents table contains any documents that are referenced in the text of the WI, as well as any parent/child documents associated with the WI. The entries in the table below are standard for all WIs that produce records.}*

*If an official regulation, directive, or requirement — such as a Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), or other document in the NASA Online Directives Information Service (NODIS) repository (i.e., a NASA Policy Directive [NPD] or NASA Procedural Requirement [NPR]) is referenced, the document must contain the disclaimer in Section 2.0, Scope, below.}*

REFERENCE DOCUMENTS	
Document	Title
IVV QM	NASA IV&V Quality Manual
IVV 16	Control of Records
NPR 1441.1	NASA Records Retention Schedules

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## 1.0 Purpose

*{This section provides a clear statement of why this WI exists.}*

The purpose of this work instruction (WI) is to establish a consistent method for [purpose].

## 2.0 Scope

*{This section states the applicability and limits to which the WI shall be used. For example, "This WI applies to what, where, when, whom, how..." This section outlines the area, function, group, or personnel to which the WI applies.}*

This WI applies to [scope].


*{If any official regulation, directive, or requirement — such as a Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), or other document in the NASA Online Directives Information Service (NODIS) repository (i.e., a NASA Policy Directive [NPD] or NASA Procedural Requirement [NPR]) — is referenced in the "Reference Documents" table on the Approval Page, the document must contain the following disclaimer:*

If any process described in this document conflicts with any part of [regulation, directive, or requirement name], this document shall be superseded by [regulation, directive, or requirement name].}

## 3.0 Definitions and Acronyms

*{This section defines those words, phrases, terms, acronyms, and abbreviations that apply specifically to the WI. Roles and terms listed in this section shall be alphabetized, with the exception that the "Acronym" subsection appears last in this section.*

*Defined roles and terms shall appear in proper case, bold, Arial font. Roles and terms that produce acronyms shall appear with those acronyms in section and subsection titles, and the acronym shall then appear throughout the definition.*

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*For example:*

### **3.x    *Procurement Request (PR)***

*A PR is the document initiating the procurement of...*

*Roles and terms that are common across NASA IV&V processes and procedures are defined in the Quality Manual. Therefore, these common roles and terms need not be defined in each WI. A disclaimer will be added to direct WI users to the Quality Manual for common term and role definitions.}*

Official NASA IV&V roles and terms are defined in the [Quality Manual](#). Specialized definitions identified in this WI are defined below.

#### **3.1    [role or term]**

[definition]

#### **3.2    Acronyms**


*{This is a list of acronyms used within the WI. The “Acronyms” subsection should be the last item in the “Definitions and Acronyms” section. All acronyms shall be defined, excluding “IV&V” and “NASA,” and shall be alphabetized.}*

[acronym]	[definition of acronym]
IMS	NASA IV&V Management System
NPR	NASA Procedural Requirement
QM	Quality Manual
WI	Work Instruction

### **4.0    Process Flow Diagram**

*{A process flow diagram is a high-level depiction of the processes described in this WI. The process flow diagram is to be constructed in the “swim lane” format, and is to graphically represent the responsibilities and actions that shall be performed by process participants. The WI and process flow diagram are to be written such that the main objectives of the process are captured and the “how-*



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*to” details are minimized. Please consult the DCC if questions arise concerning the level of detail that should be used in the WI or process flow diagram.*

*All WIs shall contain the following text in this section:}*

The following diagram depicts processes described in this document, and the responsibilities and actions that shall be performed by process participants. Any information supplemental to the depicted process will appear after the diagram.

*{If the WI does not contain a process that can be diagrammed in the “swim lane” format, please consult the DCC for further instructions.}*

*{This section can also provide important information supplemental to the process flow diagram that is critical to the execution of the processes described in the WI. This supplemental information should be presented in paragraph format. Please consult the DCC if questions arise concerning the amount or relevance of details proposed for inclusion in the WI. Additional documents, including supporting documents, may be created to capture additional details not described in the higher-level WI.}*


## 5.0 Metrics

*{This section lists all relevant metrics resulting from the processes described in the WI. Unless otherwise required, a general statement regarding metrics may be used. The following general statement shall be used in this section:}*

Any metrics associated with this WI are established and tracked within the NASA IV&V Metrics Program.

## 6.0 Records

*{This section features a table that identifies the products of the WI, their retention location and requirements, and the parties responsible for retaining and maintaining them. The table contains the outputs generated by the processes in the WI, and indicates how records will be distributed, controlled, and retained.}*

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*If records are associated with the WI, the following text shall be inserted into this section:*

The following records will be generated or updated and filed in accordance with this WI and IVV 16, *Control of Records*, and in reference to NPR 1441.1, *NASA Records Retention Schedules*.)

*{If there are no records associated with the WI, the following text should be inserted into this section:*


There are no records associated with this WI.)

*{If records are associated with the WI, the following table shall be inserted after the abovementioned text:}*

Record Name	Original	Vital	Responsible Person	Retention Requirement	Location

*{The table contains six fields that must be completed. For an existing record, as many fields as possible should be completed by the author. For a new record, the Record Name and Responsible Person fields must be completed by the author. The Records Team will complete the remaining fields for new records.*

- a. *Record Name* – contains the official name of the record and any associated form number
- b. *Original* – indicates whether the original record has been created and will be maintained at the NASA IV&V Program. Acceptable values are “Y” or “N.” A “Y” signifies that the record is an original copy. An “N” value signifies that the record is a reference copy or “non-record.”
- c. *Vital* – indicates whether the record is required to resume normal operating conditions in the event of an emergency. Acceptable values are “Y” or “N.” Program Management determines the vitality of a record.
- d. *Responsible Person* – indicates who is responsible for creating and maintaining the record
- e. *Retention Requirement* – indicates the record’s retention duration according to NASA Procedural Requirement (NPR) 1441.1, *NASA Records Retention Schedules*. Records that meet their retention

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*requirements will be retired to a Federal Records Center (FRC) or approved facility.*

1. *Original – If the record is an original, this column will contain NPR 1441.1 chapter and item numbers relating to the record's retention requirement. The Records Team shall determine and assign the record's NPR 1441.1 chapter and item numbers of the retention requirement.*
  2. *Non-record – If the record is a non-record, the NPR 1441.1 chapter and item number may not be included in this column. The Records Team shall establish retention requirements for non-records in accordance with NPR 1441.1. If applicable, the DCC shall determine and assign the record's NPR 1441.1 chapter and subsection of the retention requirement.*
- f. *Location – indicates the physical location of the record}*